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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,850	03/08/2004	Hiedi Riedel	104035.275252	2454
826	7590	07/12/2007	EXAMINER	
ALSTON & BIRD LLP			LANDAU, SHARMILA GOLLAMUDI	
BANK OF AMERICA PLAZA			ART UNIT	PAPER NUMBER
101 SOUTH TRYON STREET, SUITE 4000			1616	
CHARLOTTE, NC 28280-4000				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/796,850	RIEDEL ET AL.
	Examiner	Art Unit
	Sharmila Gollamudi Landau	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 08 March 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## DETAILED ACTION

Claims 1-20 are pending in this application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penska (5,851,544) by itself or in view of Darkwa et al (5,679,327) or Simonnet et al (6,342,238) respectively.**

Penska discloses cosmetic compositions for treating the skin or hair containing a liquid, inert, hydrophobic fluorocarbon infused with carbon dioxide. See abstract. The composition comprises i) from about 0.1% to about 70%, by weight of the composition, of a fluorocarbon infused with carbon dioxide; and ii) a cosmetically acceptable vehicle. See column 2, lines 15-25.

Component (a-b): An oil or oily material may be present, together with an emulsifier to provide, preferably, an oil-in-water emulsion in an amount of 0.5-50% and preferably 5-30%. The emollient includes esters, fatty acids, fatty, alcohols, polyols and hydrocarbons. See column 4, lines 25-32.

Component (c): Penska discloses it is advantageous to infuse the fluorocarbon prior to its incorporation in a final composition due to the easier carbonation when bubbling through a low viscosity fluid rather than through a more viscous final composition. To maximize carbon dioxide delivery, infusion of carbon dioxide is done preferably until the fluorocarbon is totally saturated with carbon dioxide. The fluorocarbon in the inventive composition carries typically 50% to 250%, preferably from 100 to 250%, most preferably from 140 to 250% its volume in carbon dioxide at 37 C. See column 3, lines 25-35.

Component (d): Powders may be incorporated into the cosmetic composition of the invention. These powders include chalk, talc, kaolin, starch, smectite clays, chemically modified magnesium aluminum silicate, organically modified montmorillonite clay, hydrated aluminum silicate, fumed silica, aluminum starch octenyl succinate and mixtures thereof. These adjuvants are taught in an amount of 0.001-20%. see column 1-10. Example 7 utilizes magnesium aluminum silicate in an amount of 0.5%.

Component (e): The cosmetic composition comprises a thickener in amounts anywhere from 0.1% to 20% by weight, preferably from about 0.5% to 10% by weight of the composition. Exemplary thickeners are cross-linked polyacrylate materials available under the trademark Carbopol from the B.F. Goodrich Company. Gums may be employed such as xanthan, carrageenan, gelatin, karaya, pectin and locust beans gum. See column 4, lines 55-67.

Component (f): The compositions preferably include a sunscreen, to further minimize aging, wrinkling and photodamage to skin which result from exposure of skin to harmful UV-A and UV-B rays in an amount of 0.1-25%. The sunscreen agents include titanium oxide and zinc oxide. See column 4, lines 12-25.

Example 6 comprises 50% perfluorodecane infused with carbon dioxide; 0.2% xanthan gum (component e); 1% titanium dioxide (component f); 3% stearic acid (i); 0.5% cetyl alcohol (iii); 0.5% sodium PCA (humectant moisturizer); 0.5% glyceryl stearate (hydrophilic surfactant), and 0.5% PEG-100 stearate (ii); among other components.

Example 7 comprises 30% perflurotributylamine infused with carbon dioxide; 0.5% hydroxyethylcellulose (hydrocolloid); 3% isostearic acid; 0.5% cetyl alcohol; 1% glycerin (moisturizer); 1% PEG-40 stearate; 1% sorbitan stearate, and 1% PEG-100 stearate; 2% petrolatum; 1% sorbitan stearate (instant hydrophilic emulsifier); and 5% isopropyl palmitate (ii); among other components.

Although Penska suggests the incorporation of powders such as talc, kaolin, starch, smectite clays, chemically modified magnesium aluminum silicate, organically modified montmorillonite clay, hydrated aluminum silicate, fumed silica, one cannot immediately envisage component (d) in example 6., i.e. example 6 lacks the specific combination of components (d) to (e). Example 7 also lacks the combination of components (d) to (e).

Darkwa teaches oil in water hair emulsion. Darkwa teaches the use of lipophilic modified clay gellants such as Bentone Gel MIO, comprised of mineral oil, propylene carbonate and QUATERNIUM-18 hectorite; Bentone Gel CAO, comprised of propylene carbonate, castor oil and Stearalkonium hectorite; Bentone Gels SS71 and S130, comprised of mineral spirits,

propylene carbonate and QUATERNIUM-18 hectorite; and Bentone Gel Lantrol, comprised of propylene carbonate, a mixture of lanolin oil (dewaxed lanolin) and isopropyl palmitate, and Stearalkonium hectorite, and mixtures thereof for phase stability. The lipophilic modified clay gellants are used in an amount of up to 3 and preferably up to 2%. See column 21, line 59 to column 22, line 35.

Simonnet teaches a cosmetic composition in an emulsions form. Simonnet teaches the use of silica powders, talc, and starch as fillers in the amount of 0-10% and preferably 0.5-4% to modify the texture of the composition. Further, Simonnet teaches lipophilic gelling agents such as modifies clays including bentones and hydrophobic silica are added to obtain stable emulsion since they correct the variation in viscosity of the phase they are dispersed in. The amount depends on the amount required to correct viscosity variation and the surfactant system. See column 8, lines 15-33.

Firstly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to look to the guidance provided by Penska and utilize the instant powders in an amount of 0.001-20%. One would have been motivated to do so with a reasonable expectation of success since Penska suggests the use of powder materials such as magnesium aluminum silicate in the composition. Similarly, one would have been motivated to add titanium dioxide or zinc oxide to example 7 in an amount of 0.1-25% since Penska suggests sunscreen agents include titanium oxide and zinc oxide are included in the composition to minimize aging, wrinkling and photodamage to skin which result from exposure of skin to harmful UV-A and UV-B rays.

Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to look to further look to Darkwa and specifically include the powders in example 7. A skilled artisan would have been motivated to add the instant powders to provide phase stability in an amount up to 3% as taught by Darkwa and Simonnet. Therefore, it would have been *prima facie* obvious to further add the instant powders to increase emulsion stability since it is known to those skilled in the art that both phases need to be similar in viscosity to prevent phase separation and thus providing emulsion stability. Simonnet also teaches the use of the powders taught by Penska in an amount of 0-10 and 0.5-4% provide texture to the composition and provide a stable emulsion. Therefore, a skilled artisan would have been further motivated to utilize the powders taught by Penska for not only stabilizing the emulsion but also providing the desired texture to the emulsion.

With regard to instant weight percent of carbon dioxide, Penska teaches the carbon dioxide can be in 50%, 100%, 140%, or 240% of the weight of the fluorocarbon.

With regard to the claimed ratios of emulsifier a:b:c, i.e. about 1:1:1, Penska teaches emollients such as fatty acids; i.e. stearic acid used in example 6, and fatty alcohols, i.e. cetyl alcohol, may be used in an amount of 0.5-50% and more than 1%, preferably 5-30% of the surfactants. See column 4, lines 25-30 and column 6, lines 5-10. Thus, it is within the skill of an artisan to optimize these ratios of the surfactant (emulsifier) system to yield the appropriate emulsion stability and prevent phase separation. “The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.”. *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809(CCPA 1969).

**Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

**SaNogueira et al (6,001,377) in view of Orr et al (4,976,953) in further view of Darkwa et al (5,679,327).**

SaNogueira et al teach a skin care composition for improving skin appearance. Examples 4-5 are directed to an oil-in-water emulsion comprising water, glycerin (moisturizer), 0.75% titanium dioxide (component f); 0.4% carbopol (component e); 1.5% stearyl alcohol (iii); 0.31% stearic acid (i); 0.31% PEG-100 stearate (ii); dimethicone; D-panthenol; 0.04% Tween 80 (hydrophilic surfactant), among other components.

SaNogueira the topical compositions useful in the subject invention may be made into a wide variety of product forms such as are known in the art, including lotions, creams, gels, sticks, sprays, ointments, pastes, mousses, solutions, aerosols, emulsions, and gels. Aerosol forms, which are typically applied to the skin as a spray on product, are made by adding a propellant to the composition. See column 9, lines 15-55. SaNogueira teaches the use of thickeners in an amount of 0.1-5% may be incorporated into the composition, which include hectorite and silica (inorganic thickener). See column 21, lines 15-25 and column 26, lines 6-7. The composition further may comprise oil absorbents including clays.

SaNogueira does not specify the instant propellant or specifically exemplify the incorporation of the inorganic thickener.

Orr teaches a skin conditioning compositions, which can be formulated into aerosols by combining a propellant such as hydrocarbons, carbon dioxide, or nitrous oxide, in an amount of 3-12% with the composition. see column 8, lines 5-30.

Darkwa teaches oil in water hair emulsion. Darkwa teaches the use of lipophilic modified clay gellants such as Bentone Gel MIO, comprised of mineral oil, propylene carbonate and QUATERNIUM-18 hectorite; Bentone Gel CAO, comprised of propylene carbonate, castor oil and Stearalkonium hectorite; Bentone Gels SS71 and S130, comprised of mineral spirits, propylene carbonate and QUATERNIUM-18 hectorite; and Bentone Gel Lantrol, comprised of propylene carbonate, a mixture of lanolin oil (dewaxed lanolin) and isopropyl palmitate, and Stearalkonium hectorite, and mixtures thereof for phase stability. The lipophilic modified clay gellants are used in an amount of up to 3 and preferably up to 2%. See column 21, line 59 to column 22, line 35.

Firstly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of SaNogueira et al and Orr and utilize the instant propellant. One would have been motivated to do so with a reasonable expectation of success and similar results since SaNogueira discloses that the composition may be formulated into any form known to those skilled in the art including aerosols by combining the composition with a propellant and Orr teaches propellant gases such as carbon dioxide and nitrous oxide are known and routinely used in the art to formulate skin conditioning compositions into an aerosol form. Therefore, a skilled artisan would have been motivated to incorporate a propellant gas in the composition if one desired an aerosol product.

Secondly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of SaNogueira and further incorporate the instant inorganic thickeners in the composition. One would have been motivated to do so with a reasonable expectation of success and similar results since SaNogueira teaches the incorporation

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of hectorites in the composition as a thickeners in the composition and Darkwa teaches lipophilic modified clay gellants such as hectorites provide phase stability in an emulsion. Therefore, it would have been *prima facie* obvious to further add the inorganic thickeners to increase emulsion stability.

With regard to the claimed ratios of emulsifier a:b:c, i.e. about 1:1:1, the composition comprises preferably about 1-10% and more preferably 2-9% of a structuring agents including stearic acid and fatty alcohols. See column 20, lines 25-67. The emulsifiers including instant PEG-100 stearate is utilized in an amount of about 0.05-5%. See column 15, lines 55-65. Thus, it is within the skill of an artisan to optimize these ratios of the surfactant (emulsifier) system to yield the appropriate emulsion stability and prevent phase separation. "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages." *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809(CCPA 1969).

### *Conclusion*

All the claims are rejected at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila Gollamudi Landau whose telephone number is 571-272-0614. The examiner can normally be reached on M-F (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Sharmila Gollamudi Landau*  
Sharmila Gollamudi Landau  
Primary Examiner  
Art Unit 1616

6/19/07